We claim:

1.   A method suitable for deciding how to classify a sample in one of a number of predetermined classes, the method comprising:

(a)   associating a weight w_{ij} with each of a plurality of classifiers i which are class models for how to classify a sample j in one of a number of predetermined classes k;

(b)   calculating for each of said predetermined classes k a weighted summation CL_{jk} across said classifiers i of the likelihood l_{ijk} that the sample belongs to that respective class k, weighted by the weight w_{ij}; and

(c)   designating the sample j as belonging to the class k which has an associated weighted summation of likelihoods CL_{jk} which is greatest in value.

2.   The method as claimed in claim 1, wherein the weight w_{ij} is derived from a metric of relative confidence L_{ij}, metric of relative which is calculated as an L-statistic, or linear combination of an order statistic, which represents the statistical separation among an order statistic of the classes k for a particular classifier i.

3.   The method as claimed in claim 2, wherein the L-statistic L_{ij} is of the log-likelihoods of respective classes k for classifiers i.

4.   The method as claimed in claim 2, wherein the L-statistic L_{ij}, for a particular sample j, is calculated as: $L_{ij} = a_1 l_{ij1} + a_2 l_{ij2} + ... + a_n l_{ijn}$, where l_{ijk}s form order statistic, that is $l_{ij1} > l_{ij2} > ... > l_{ijn}$ and $a_1 = 1$, $a_2 = -1$ and all other a_is = 0.

5.   The method as claimed in claim 2, wherein the weight w_i derived from the metric of relative confidence is calculated as a function of (a) sample confidence L_{ij}, equal to

the L-statistic L_{ij} and (b) overall confidence H_i, the cumulative mean of the sample confidence L_{ij} over a plurality of samples j.

6.   The method as claimed in claim 5, wherein the overall confidence H_i is successively updated with the sample confidence L_{ij} of each sample j.

7.   A computer program product having a computer readable medium having a computer program recorded therein for deciding how to classify a sample in one of a number of predetermined classes, said computer program product comprising:

(a)   code means for associating a weight w_{ij} with each of a plurality of classifiers i which are class models for how to classify a sample j in one of a number of predetermined classes k;

(b)   code means for calculating for each of said predetermined classes k a weighted summation CL_{jk} across said classifiers i of the likelihood l_{ijk} that the sample belongs to that respective class k, weighted by the weight w_{ij}; and

(c)   code means designating the sample j as belonging to the class k which has an associated weighted summation of likelihoods CL_{jk} which is greatest in value.

8.   An apparatus for classifying a data sample in one of a number of predetermined classes, the apparatus comprising: input means to receive data; and processor means for calculating associating a weight w_{ij} with each of a plurality of classifiers i which are class models for how to classify a sample j in one of a number of predetermined classes k, and for designating calculating for each of said predetermined classes k a weighted summation CL_{jk} across said classifiers i of the likelihood l_{ijk} that the sample belongs to that respective class k, weighted by the weight w_{ij}.

9.   The apparatus as claimed in claim 8, wherein the weight w_{ij} is derived from a metric of relative confidence L_{ik} metric of relative which is calculated as an L-static, or linear combination of an order statistic, which represents the statistical separation among an order statistic of the classes k for a particular classifier i.

10.   The apparatus as claimed in claim 9, wherein the L-statistic L_{ij} is of the log-likelihoods of respective classes k for classifiers i.

11.   The apparatus as claimed in claim 9, wherein the L-statistic L_{ij}, for a particular j, is calculated as: $L_{ij} = a_1 l_{ij1} + a_2 l_{ij2} + \ldots + a_n l_{ijn}$, where $l_{ijk}s$ form order statistic, that is $l_{ij1} > l_{ij2} > \ldots > l_{ijn}$ and $a_1 = 1$, $a_2 = -1$ and all other $a_is = 0$.

12.   The apparatus as claimed in claim 9, wherein the weight w_i derived from the metric of relative confidence is calculated as a function of (a) sample confidence L_{ij}, equal to the L-statistic L_{ij} and (b) overall confidence H_i, the cumulative mean of the sample confidence L_{ij} over a plurality of samples j.

13.   The apparatus as claimed in claim 12, wherein, the overall confidence H_i is successively updated with the sample confidence L_{ij} of each sample j.